

**CLAIMS:**

1. A method of generating an image, comprising:  
emitting ultrasound signals;  
receiving reflected ultrasound signals;  
converting the reflected ultrasound signals to a stereovision ultrasound image in real time; and  
displaying the stereovision ultrasound image in real time.
2. The method of claim 1, wherein the converting of the reflected ultrasound signals comprises:  
generating 3D ultrasound data volumes from the reflected ultrasound signals; and  
rendering the 3D ultrasound data volumes into first and second 2D images by streaming,  
the first and second 2D images comprising the stereovision ultrasound image.
3. The method of claim 2, further comprising adjusting the stereovision ultrasound image in real time.
4. The method of claim 3, further comprising updating the stereovision ultrasound image at a rate of greater than or equal to 10 frames per second.
5. An ultrasound apparatus, comprising:  
an emitter to emit ultrasound signals;  
a receiver to receive reflected ultrasound signals;  
a signal processor to convert the reflected ultrasound signals to a stereovision ultrasound image in real time; and  
a display unit to display the stereovision ultrasound image in real time.
6. The ultrasound apparatus of claim 5, wherein the signal processor comprises:  
a generator to generate 3D ultrasound data volumes from the reflected ultrasound signals; and  
a rendering processor to render the 3D ultrasound data volumes into first and second 2D images by streaming,  
the first and second 2D images comprising the stereovision ultrasound image.
7. The ultrasound apparatus of claim 6, further comprising a transport unit to house said emitter, receiver, display unit, rendering processor and said generator.
8. The ultrasound apparatus of claim 7, wherein said transport unit is a cart.

9. The ultrasound apparatus of claim 7, wherein said display unit further comprises a control unit to control the stereovision ultrasound image in real time.
10. The ultrasound apparatus of claim 9, wherein the stereovision ultrasound image is updated at a rate of greater than or equal to 20 frames per second.
11. The ultrasound apparatus of claim 10, wherein the 3D ultrasound data volumes comprise first and second 3D data volumes, and said rendering processor renders the first and second 3D data volumes into the first and second 2D images, respectively.
12. The ultrasound apparatus of claim 11, further comprising a select unit to alternately transmit the first and second 2D images to said display unit to display the stereovision ultrasound image.
13. The ultrasound apparatus of claim 12, wherein a user views the stereovision ultrasound image through shuttered glasses.
14. The ultrasound apparatus of claim 12, wherein said display unit tracks an eye movement of a user to create the stereovision ultrasound image.
15. The ultrasound apparatus of claim 6, wherein said rendering processor continuously streams the 3D ultrasound data volumes.
16. The ultrasound apparatus of claim 12, wherein a user views the stereovision ultrasound image, and the stereovision ultrasound image changes corresponding to a movement of the user.
17. The ultrasound apparatus of claim 16, wherein the user views the stereovision ultrasound image through a virtual reality viewing unit connectible to the display unit to change the stereovision ultrasound image in accordance with the movement of the user.
18. The ultrasound apparatus of claim 12, wherein said rendering processor renders the first and second 3D data volumes in series.
19. The ultrasound apparatus of claim 12, wherein said rendering processor comprises left and right rendering processors to render the first and second 3D data volumes, respectively, in parallel.
20. The ultrasound apparatus of claim 12, wherein said select unit is a multiplexor.
21. The ultrasound apparatus of claim 5, wherein said emitter and said receiver comprise a two-dimensional phased array transducer.
22. An ultrasound apparatus, comprising:  
an emitter to emit ultrasound signals;

- a receiver to receive reflected ultrasound signals;
  - a signal processor to convert the reflected ultrasound signals to a stereovision ultrasound image in real time;
  - a display unit to display the stereovision ultrasound image; and
  - a transport unit to house said emitter, receiver, signal processor and said display unit.
23. The ultrasound apparatus of claim 22, wherein the signal processor comprises:
- a generator to generate 3D ultrasound data volumes from the reflected ultrasound signals; and
  - a rendering processor to render the 3D ultrasound data volumes into first and second 2D images,
- the first and second 2D images comprising the stereovision ultrasound image.
24. The ultrasound apparatus of claim 23, wherein said emitter and said receiver comprise a two-dimensional phased array transducer.
25. An ultrasound apparatus, comprising:
- a transducer to emit ultrasound signals and to receive reflected ultrasound signals;
  - a scanner to generate a stream of detected ultrasound data volumes from the reflected ultrasound signals;
  - a rendering processor to render the stream of detected ultrasound data volumes into first and second 2D rendered images;
  - first and second buffers to hold the first and second 2D rendered images, respectively;
  - a display unit; and
  - a multiplexor to alternately transmit the first and second 2D rendered images to the display unit to generate a stereovision ultrasound image in real time.
26. The ultrasound apparatus of claim 25, further comprising a cart to house said transducer, scanner, rendering processor, first and second buffers, multiplexor and said display unit.
27. The ultrasound apparatus of claim 25, wherein said rendering processor renders the stream of detected ultrasound data volumes by streaming.
28. The ultrasound apparatus of claim 27, wherein the stereovision ultrasound image is a Color Flow Mode (CFM) image.

29. The ultrasound apparatus of claim 27, wherein the stereovision ultrasound image is a Power Doppler image.
30. The ultrasound apparatus of claim 27, wherein the stereovision ultrasound image is an Acoustic Quantification (AQ) image.
31. The method of claim 3, further comprising updating the stereovision ultrasound image at a latency of less than or equal to 200 milliseconds from start of acquisition to display.